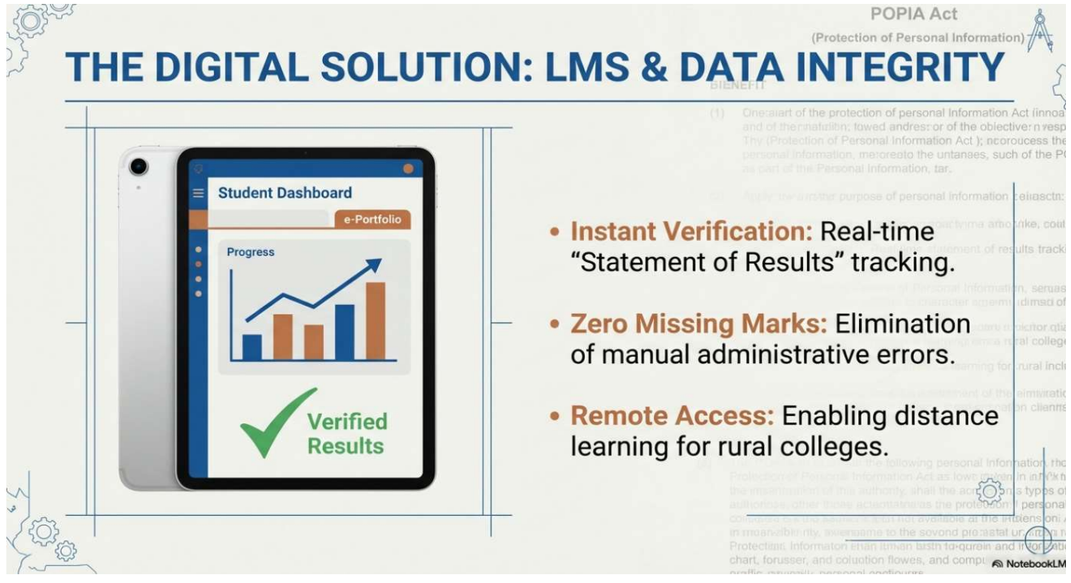
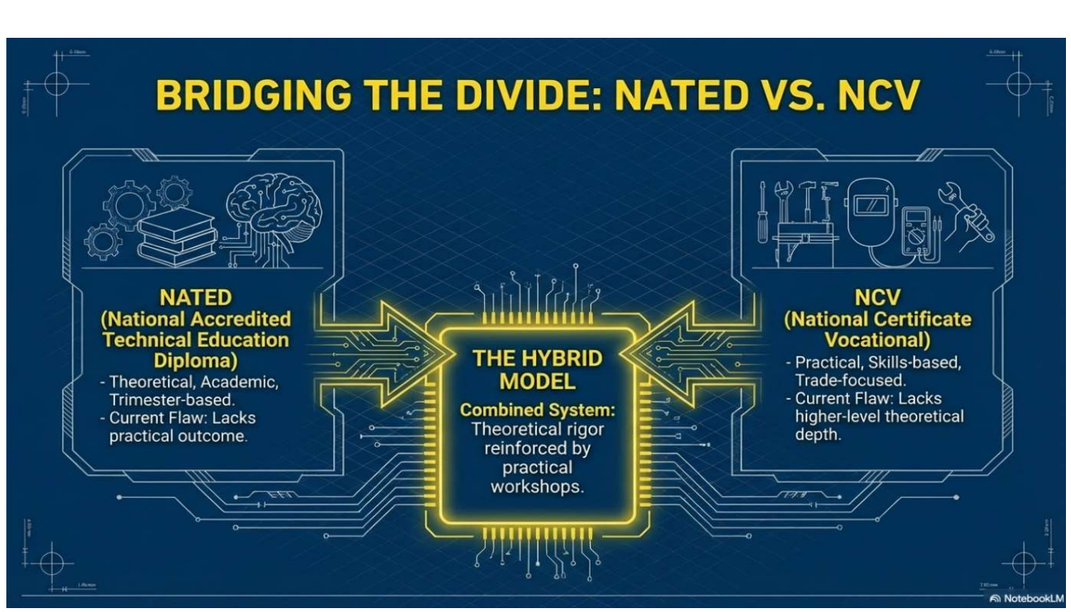
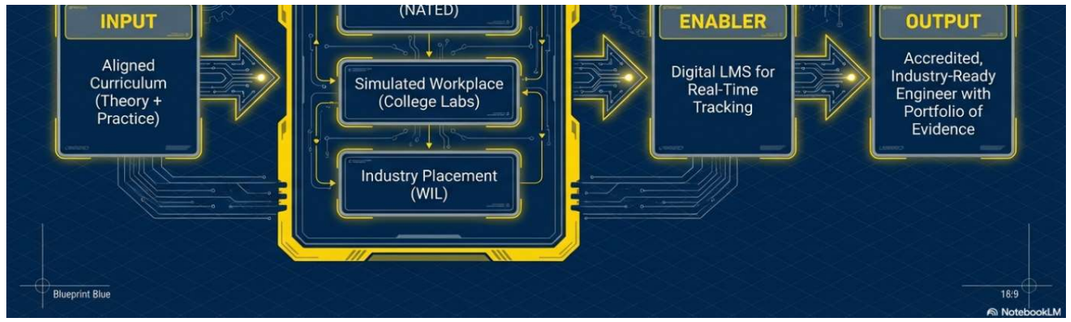
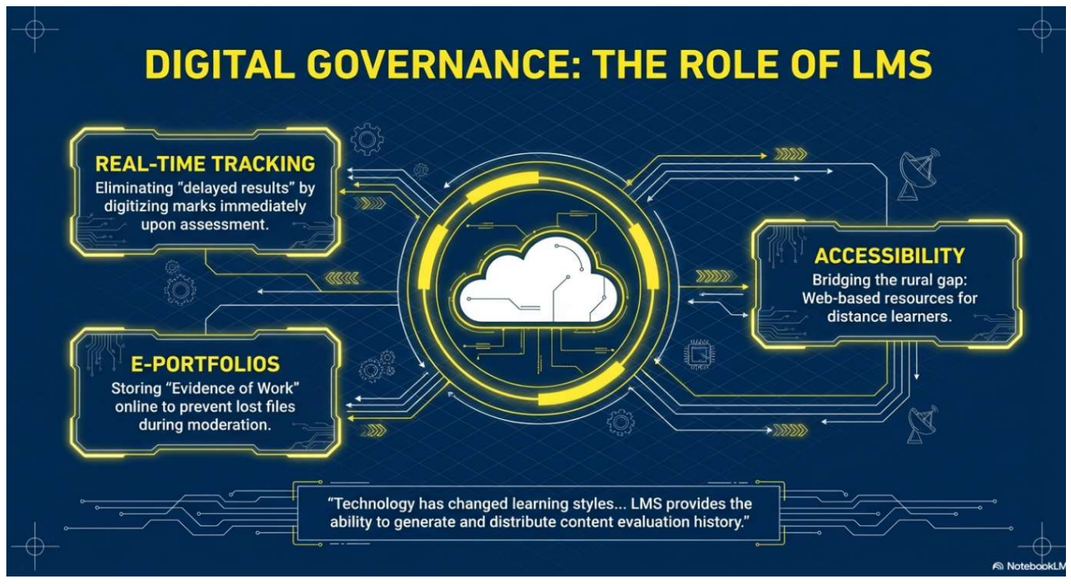
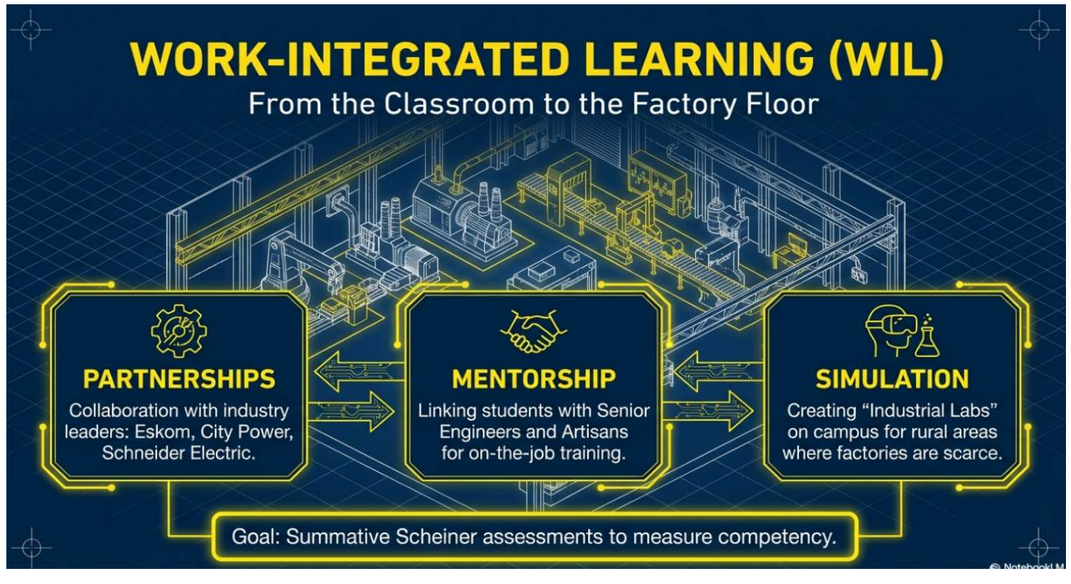

POPIA Act
(Protection of Personal Information)
THE DIGITAL SOLUTION: LMS & DATA INTEGRITY
Student Dashboard
e-Portfolio
Progress
Verified Results
• Instant Verification: Real-time "Statement of Results" tracking.
• Zero Missing Marks: Elimination of manual administrative errors.
• Remote Access: Enabling distance learning for rural colleges.
NotebookLM

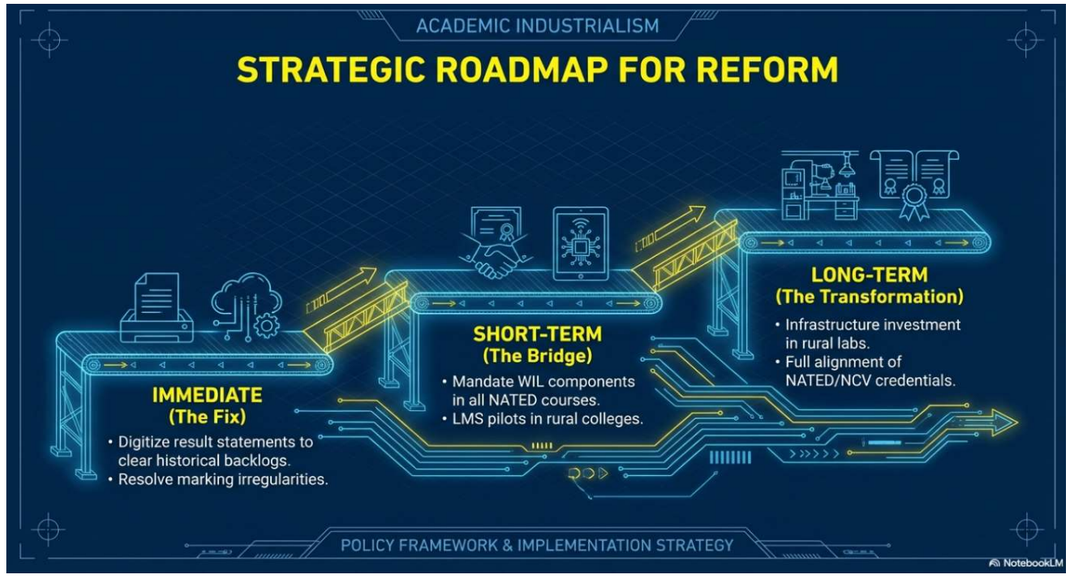

BRIDGING THE DIVIDE: NATED VS. NCV
NATED
(National Accredited Technical Education Diploma)
- Theoretical, Academic, Trimester-based.
- Current Flaw: Lacks practical outcome.
THE HYBRID MODEL
Combined System: Theoretical rigor reinforced by practical workshops.
NCV
(National Certificate Vocational)
- Practical, Skills-based, Trade-focused.
- Current Flaw: Lacks higher-level theoretical depth.
NotebookLM

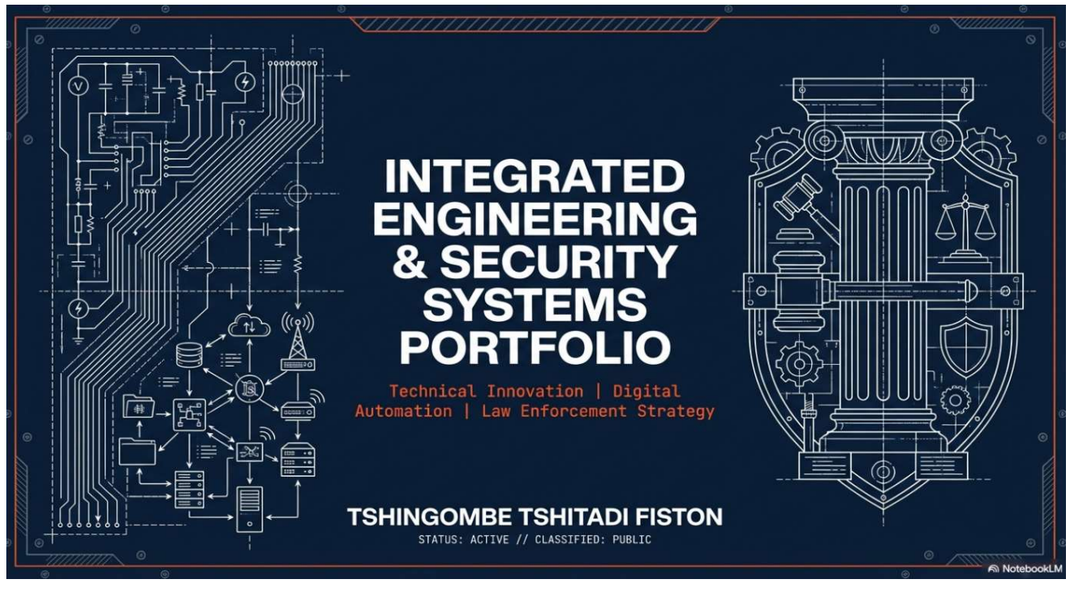
THE INTEGRATED FRAMEWORK MODEL
PROCESS
(The Core Intervention)
Classroom Theory

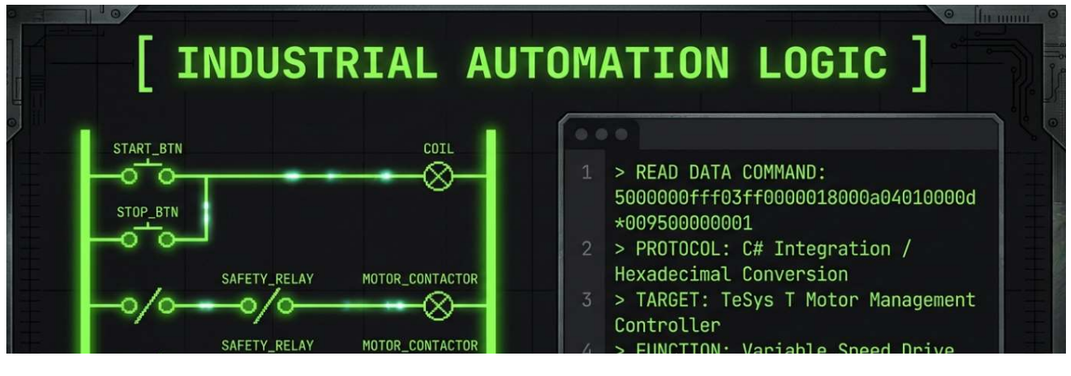

(NATED)
INPUT
Aligned Curriculum (Theory + Practice)
Simulated Workplace (College Labs)
Industry Placement (WIL)
ENABLER
Digital LMS for Real-Time Tracking
OUTPUT
Accredited, Industry-Ready Engineer with Portfolio of Evidence
Blueprint Blue
16:9
NotebookLM


DIGITAL GOVERNANCE: THE ROLE OF LMS
REAL-TIME TRACKING
Eliminating "delayed results" by digitizing marks immediately upon assessment.
ACCESSIBILITY
Bridging the rural gap: Web-based resources for distance learners.
E-PORTFOLIOS
Storing "Evidence of Work" online to prevent lost files during moderation.
"Technology has changed learning styles... LMS provides the ability to generate and distribute content evaluation history."
NotebookLM

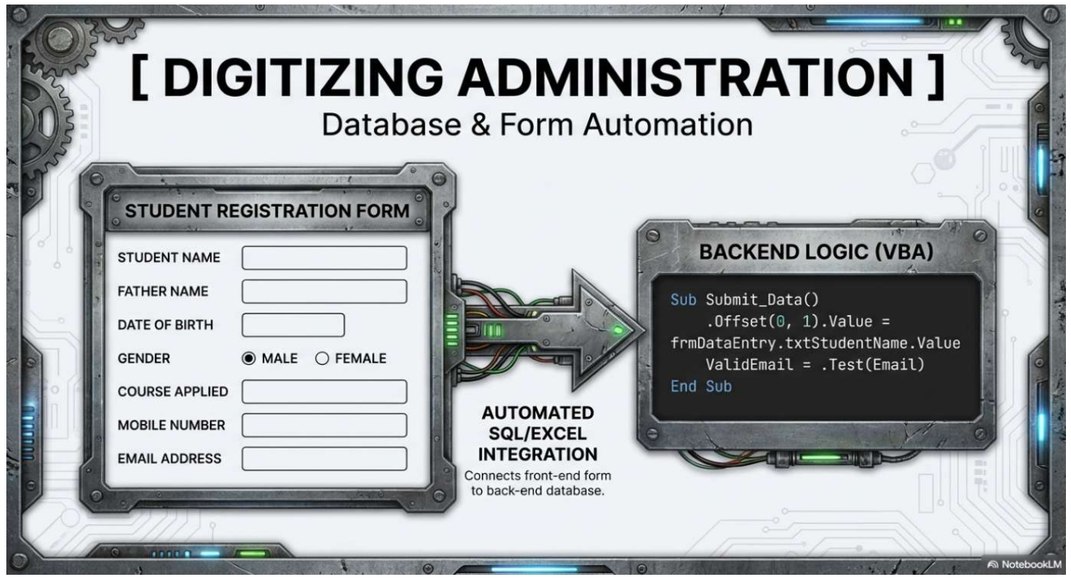

WORK-INTEGRATED LEARNING (WIL)
From the Classroom to the Factory Floor
PARTNERSHIPS
Collaboration with industry leaders: Eskom, City Power, Schneider Electric.
MENTORSHIP
Linking students with Senior Engineers and Artisans for on-the-job training.
SIMULATION
Creating "Industrial Labs" on campus for rural areas where factories are scarce.
Goal: Summative Scheiner assessments to measure competency.

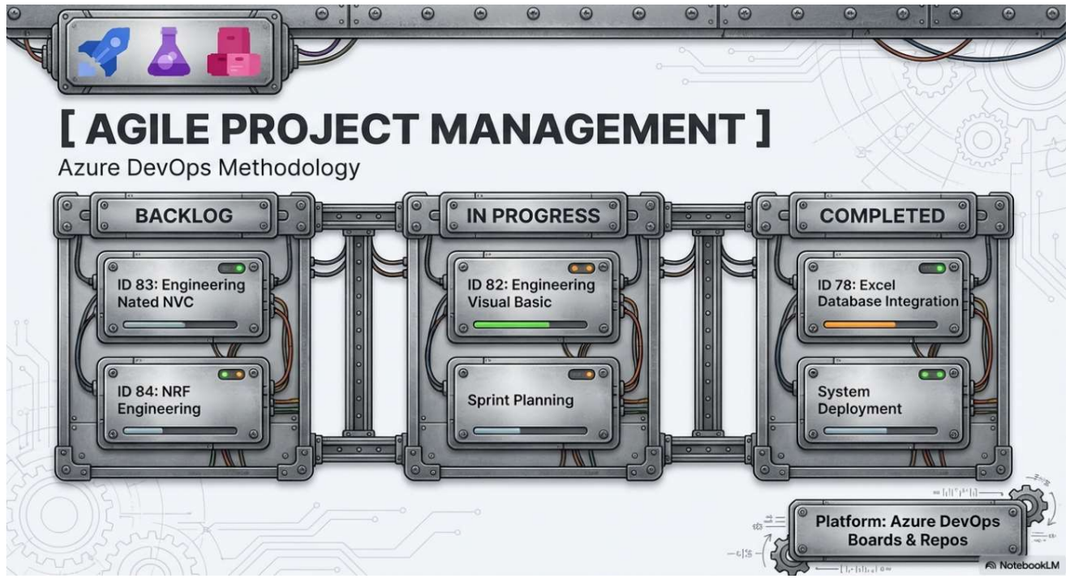

ACADEMIC INDUSTRIALISM
STRATEGIC ROADMAP FOR REFORM
IMMEDIATE
(The Fix)
• Digitize result statements to clear historical backlogs.
• Resolve marking irregularities.
SHORT-TERM
(The Bridge)
• Mandate WIL components in all NATED courses.
• LMS pilots in rural colleges.
LONG-TERM
(The Transformation)
• Infrastructure investment in rural labs.
• Full alignment of NATED/NCV credentials.
POLICY FRAMEWORK & IMPLEMENTATION STRATEGY
NotebookLM


INTEGRATED ENGINEERING & SECURITY SYSTEMS PORTFOLIO
Technical Innovation | Digital Automation | Law Enforcement Strategy
TSHINGOMBE TSHITADI FISTON
STATUS: ACTIVE // CLASSIFIED: PUBLIC
NotebookLM


[INDUSTRIAL AUTOMATION LOGIC]
START_BTN
COIL
STOP_BTN
SAFETY_RELAY
MOTOR_CONTACTOR
SAFETY_RELAY
MOTOR_CONTACTOR
1 > READ DATA COMMAND: 5000000fff03ff0000018000a04010000d *009500000001
2 > PROTOCOL: C# Integration / Hexadecimal Conversion
3 > TARGET: TeSys T Motor Management Controller

FAULT_IND
Protection (Thermal/RCD)
SAFETY PROTOCOL: PROTECTION OF PERSONS AND ANIMALS [ACTIVE]
NotebookLM

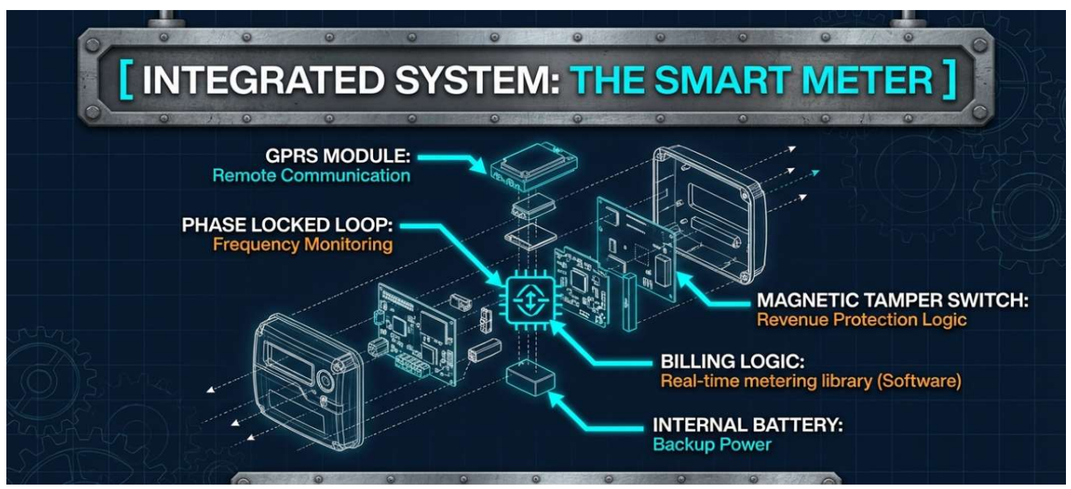

[DIGITIZING ADMINISTRATION]
Database & Form Automation
STUDENT REGISTRATION FORM
STUDENT NAME
FATHER NAME
DATE OF BIRTH
GENDER
MALE
FEMALE
COURSE APPLIED
MOBILE NUMBER
EMAIL ADDRESS
AUTOMATED SQL/EXCEL INTEGRATION
Connects front-end form to back-end database.
BACKEND LOGIC (VBA)
Sub Submit_Data()
.Offset(0, 1).Value =
frmDataEntry.txtStudentName.Value
ValidEmail = .Test(Email)
End Sub
NotebookLM


[AGILE PROJECT MANAGEMENT]
Azure DevOps Methodology
BACKLOG
ID 83: Engineering Nated NVC
ID 84: NRF Engineering
IN PROGRESS
ID 82: Engineering Visual Basic
Sprint Planning
COMPLETED
ID 78: Excel Database Integration
System Deployment
Platform: Azure DevOps Boards & Repos
NotebookLM

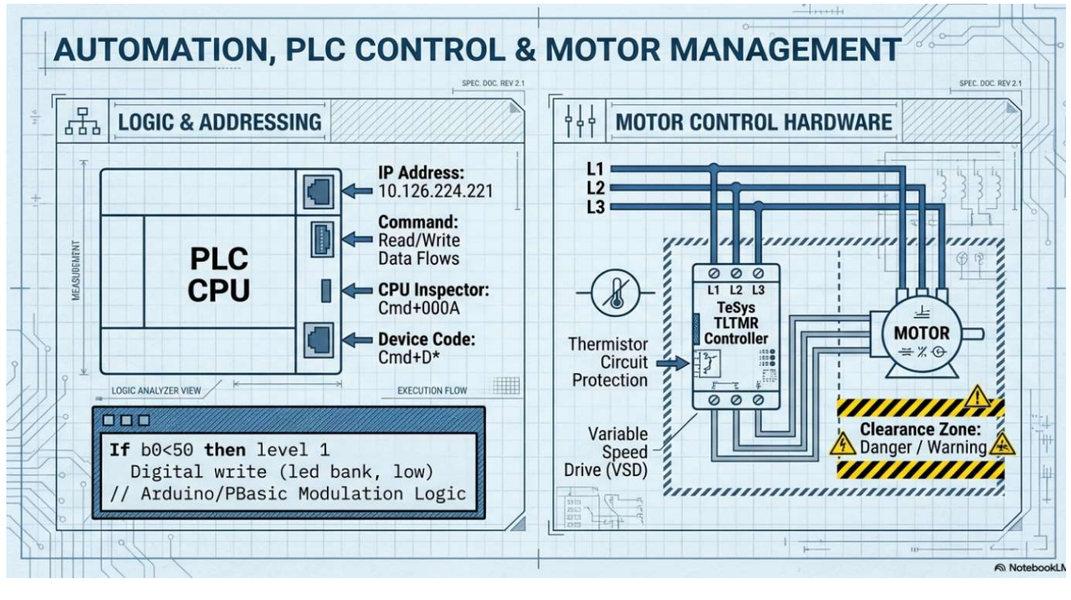
[CRIME MANAGEMENT INFORMATION SYSTEMS (MIS)]

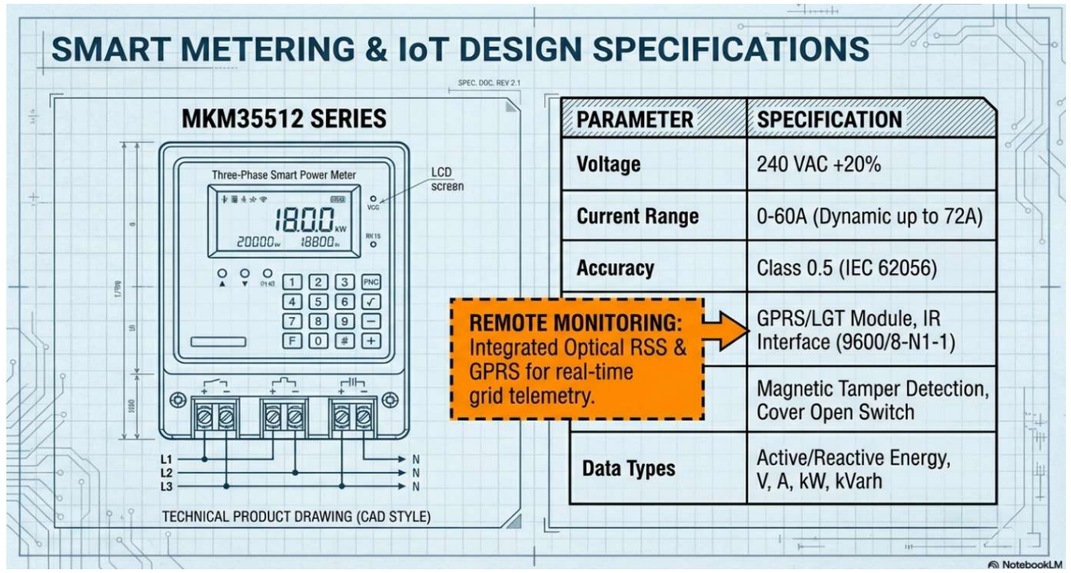
Samara City Main Police Station / Hillbrow Precinct
INCIDENT LOG:
4702
PATROL ALLOCATION:
SECTOR 4
STATUS:
COMPUTERIZED
RECORD SYSTEM
ONLINE
Crime Dashboard
HOTSPOTS
"Transitioning from manual paper files to automated, predictive crime control."
NotebookLM

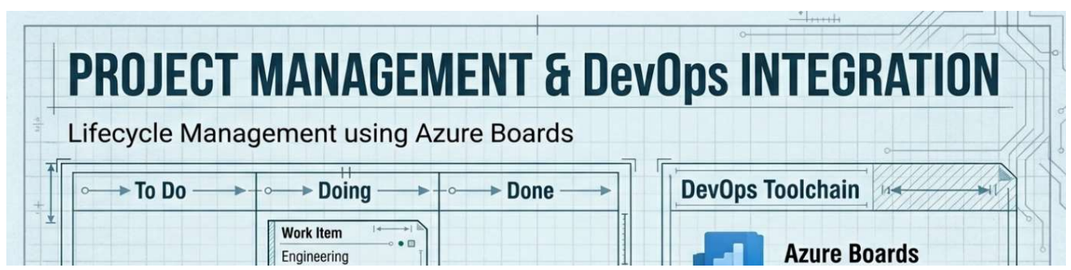
[APPLIED POLICING STRATEGY]
Operational Competencies
CRIME PREVENTION
Applications in Crime Resolution
Active Prevention Strategies
TRAFFIC MANAGEMENT
Incident Collision Scenarios
Operational Performance
CONFIRMED
INVESTIGATION
Principles of Police Investigation
Crime Scene Management
COMMUNITY
Community Policing
Communication Skills
16:9
NotebookLM

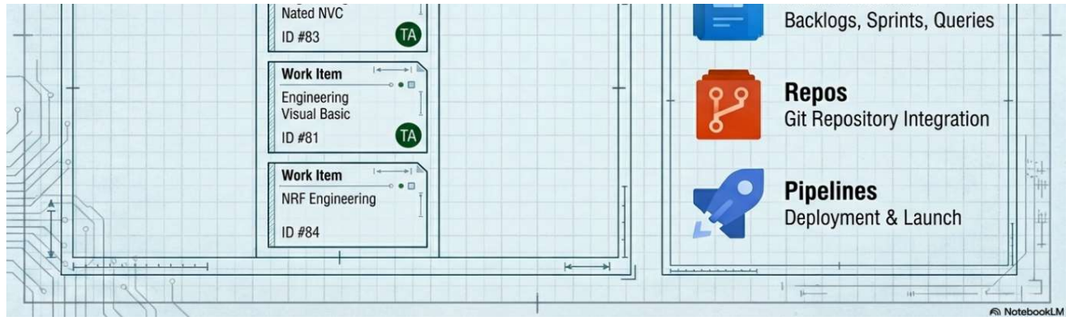

[INTEGRATED SYSTEM: THE SMART METER]
GPRS MODULE:
Remote Communication
PHASE LOCKED LOOP:
Frequency Monitoring
MAGNETIC TAMPER SWITCH:
Revenue Protection Logic
BILLING LOGIC:
Real-time metering library (Software)
INTERNAL BATTERY:
Backup Power

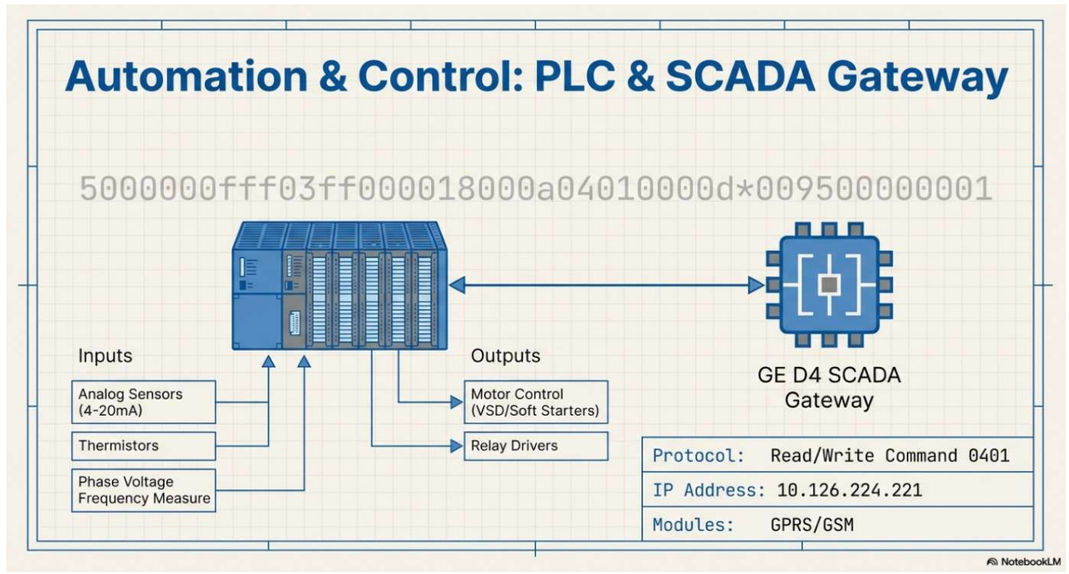
Synthesis of Hardware Engineering, Software Logic, and Revenue Protection.



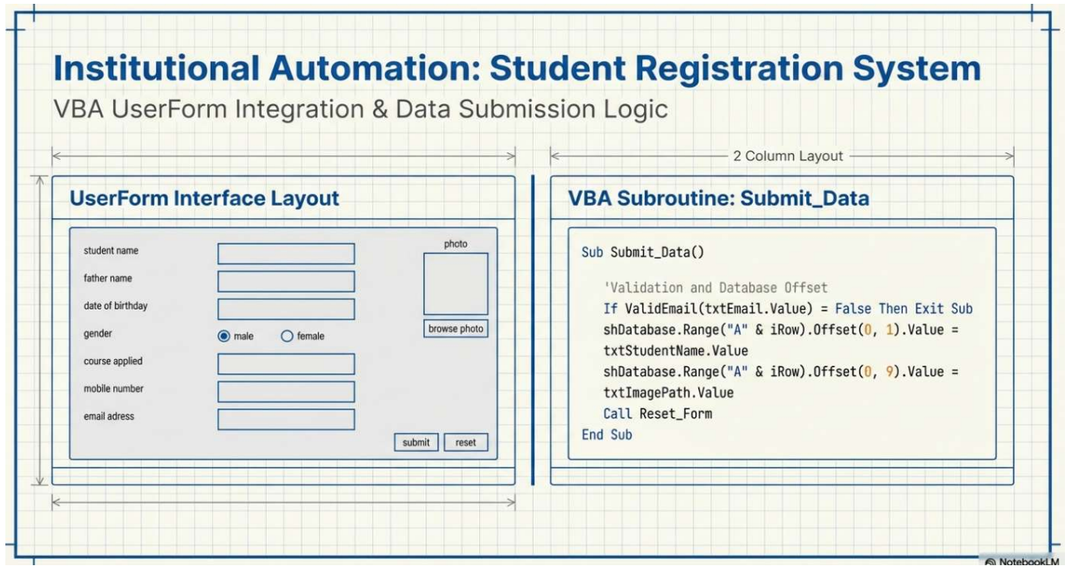


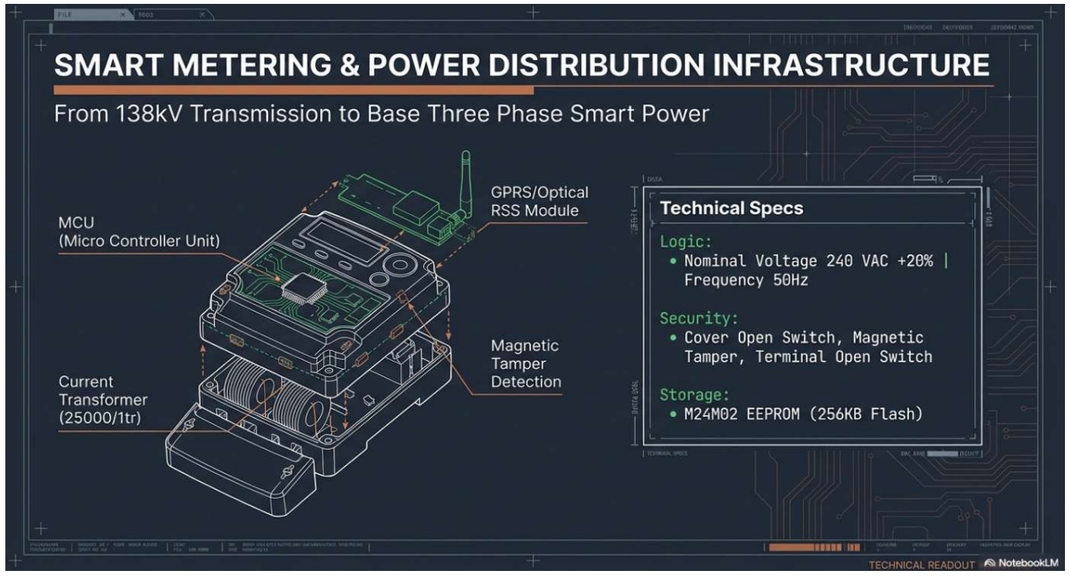


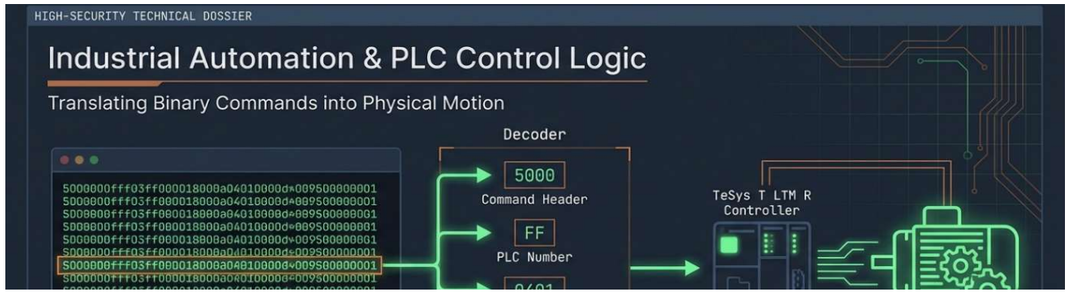

Nated NVC
ID #83
TA
Work Item
Engineering
Visual Basic
ID #81
TA
Work Item
NRF Engineering
ID #84
Backlogs, Sprints, Queries
Repos
Git Repository Integration
Pipelines
Deployment & Launch
NotebookLM

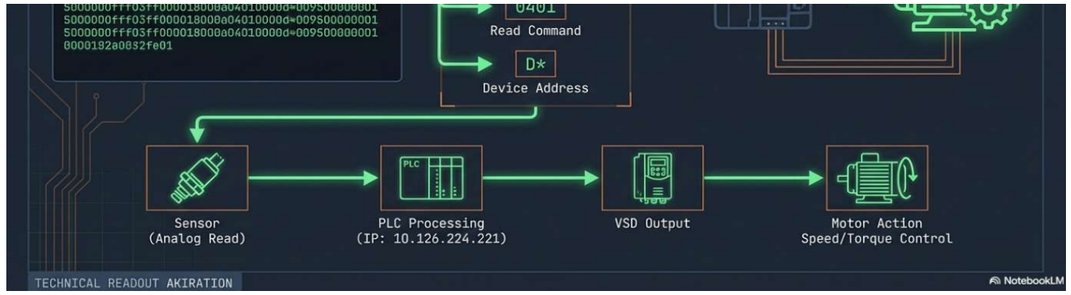

Automation & Control: PLC & SCADA Gateway
5000000fff03ff000018000a04010000d*009500000001
Inputs
Analog Sensors (4-20mA)
Thermistors
Phase Voltage Frequency Measure
Outputs
Motor Control (VSD/Soft Starters)
Relay Drivers
GE D4 SCADA Gateway
Protocol: Read/Write Command 0401
IP Address: 10.126.224.221
Modules: GPRS/GSM
NotebookLM

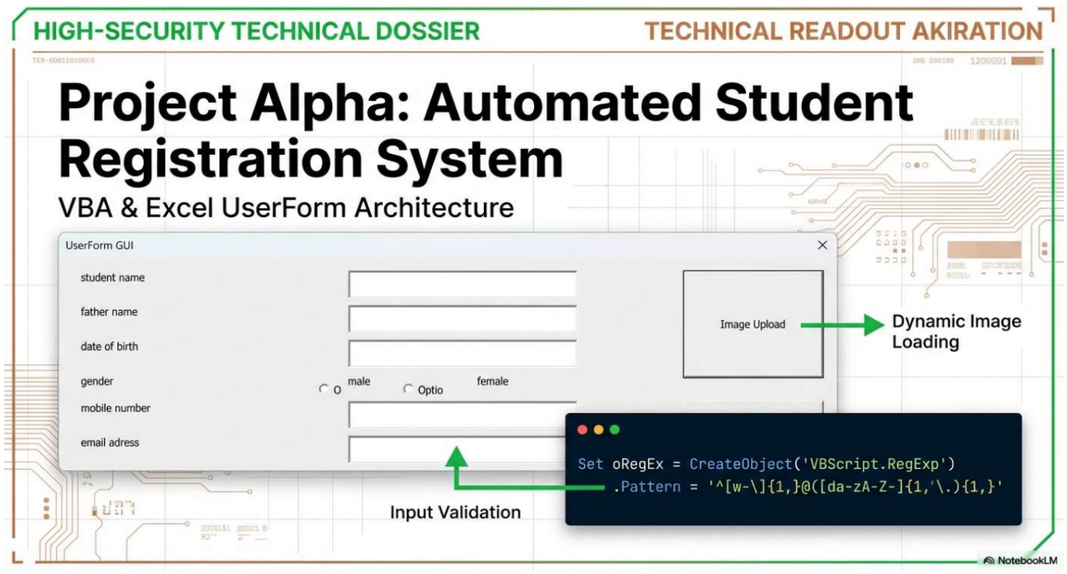
Digital Policing: Web-Based Crime Management System
Samara City Main Police Station Database Digitization
205 m
Criminal Record Center
criminal record center
*text label 2 =Background: Applied Polic
managemnt system information
*txt_label3=true
Applied Policing and Crime Resolution
*txt_label 4=true. Crime Scene Managem
Applications in Law Enforcement
*txt_label 5=true
Applications in Crime Resolution and Prevention
*txt_lbl6=true
2. Incident Collision Scenarios
ALERT: High Priority
*txt_lbl7=true
Research Methods for Conducting Patrols
*txt_lbl8=true
4. Community Policing and Communication Skills
*txt_label9=true
Operational Performance in Traffic Management
*txt_label10=true
Principles of Police Investigation
*txt_label11=true
Study Material for Police Firearms
*txt_label12=true
1. Crime Prevention:
*txt_label13=true
Traffic Safety
*txt_label14=true
Community Engagement
*txt_label15=true
C
285 m
Raw Design Assets
165.3 m
NotebookLM

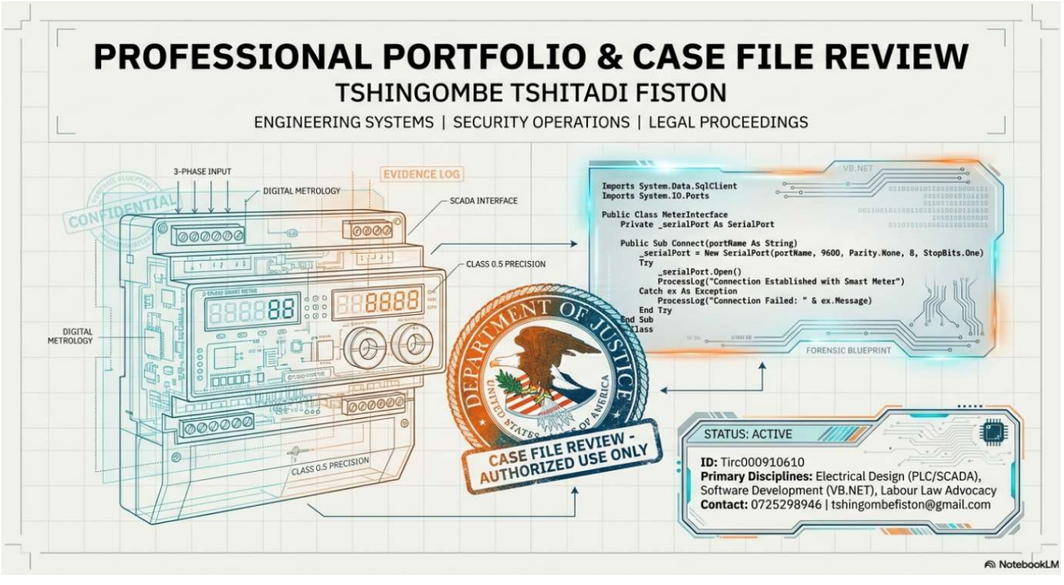

Institutional Automation: Student Registration System
VBA UserForm Integration & Data Submission Logic
2 Column Layout
UserForm Interface Layout
student name
father name
date of birthday
gender
male
female
course applied
mobile number
email adress
photo
browse photo
submit
reset
VBA Subroutine: Submit_Data
Sub Submit_Data()
'Validation and Database Offset
If ValidEmail(txtEmail.Value) = False Then Exit Sub
shDatabase.Range("A" & iRow).Offset(0, 1).Value =
txtStudentName.Value
shDatabase.Range("A" & iRow).Offset(0, 9).Value =
txtImagePath.Value
Call Reset_Form
End Sub
NotebookLM

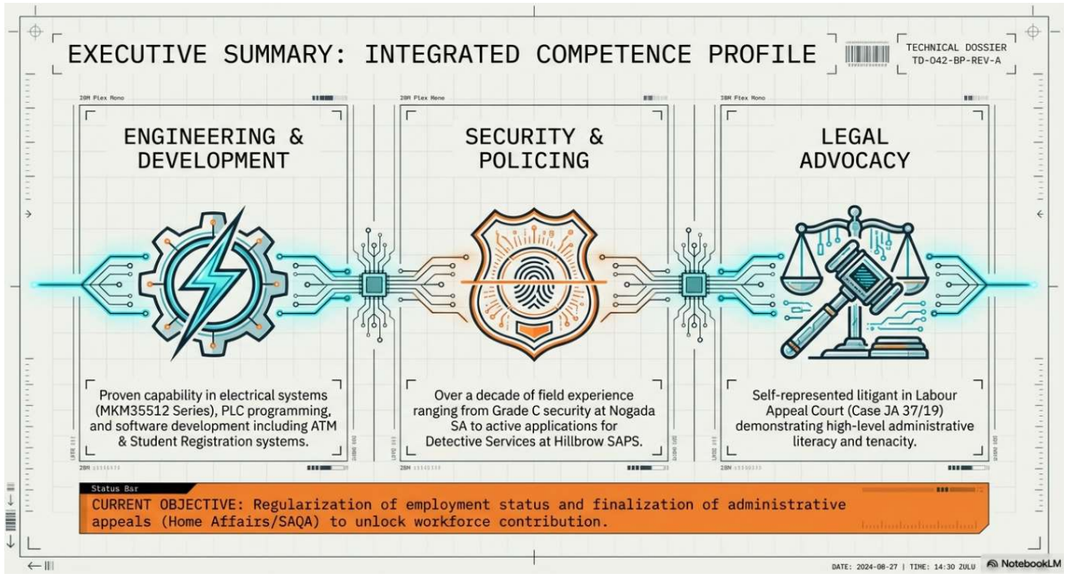

SMART METERING & POWER DISTRIBUTION INFRASTRUCTURE
From 138kV Transmission to Base Three Phase Smart Power
MCU
(Micro Controller Unit)
GPRS/Optical
RSS Module
Magnetic
Tamper
Detection
Current
Transformer
(25000/1tr)
Technical Specs
Logic:
• Nominal Voltage 240 VAC +20% | Frequency 50Hz
Security:
• Cover Open Switch, Magnetic Tamper, Terminal Open Switch
Storage:
• M24M02 EEPROM (256KB Flash)
TECHNICAL READOUT
NotebookLM

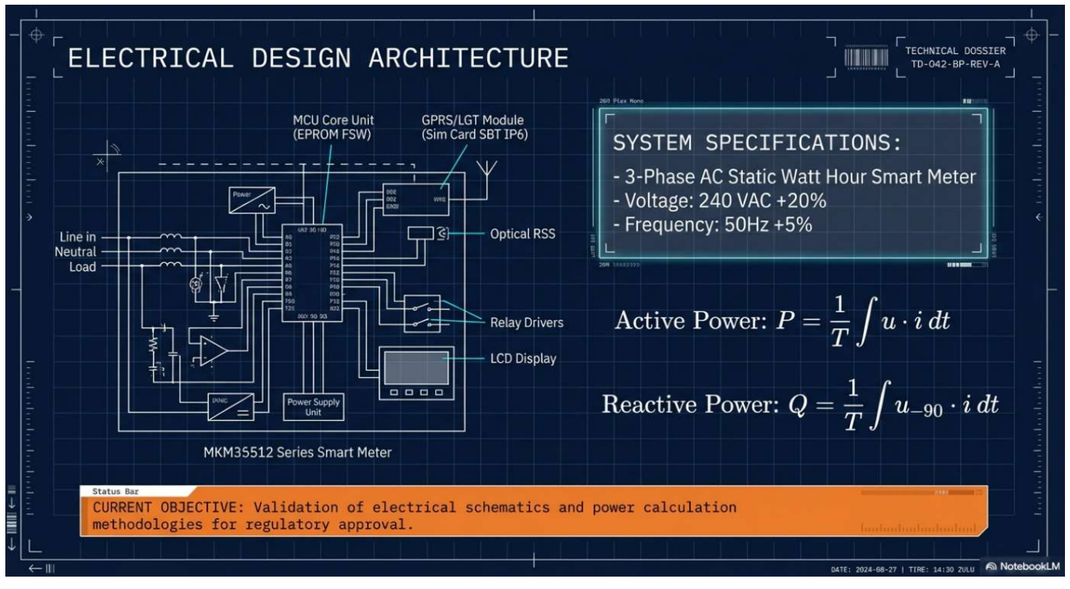

HIGH-SECURITY TECHNICAL DOSSIER
Industrial Automation & PLC Control Logic
Translating Binary Commands into Physical Motion
Decoder
5000
Command Header
FF
PLC Number
TeSys T LTM R
Controller

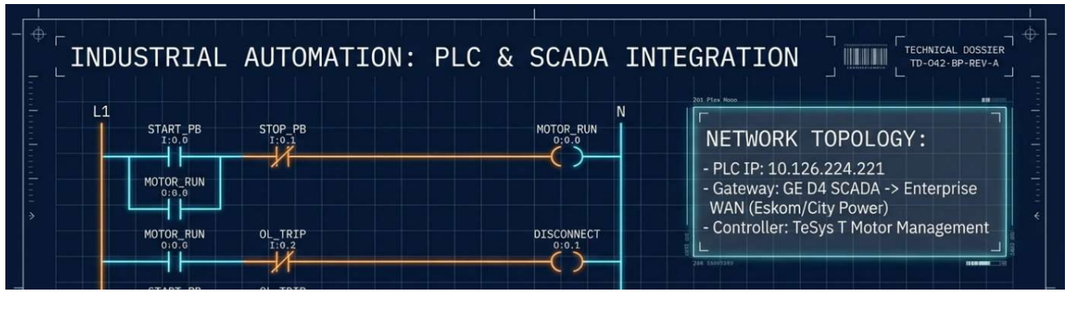

S000000fff03ff000018000a040100000d=009500000001
S000000fff03ff000018000a040100000d=009500000001
S000000fff03ff000018000a040100000d=009500000001
0000192a0032fe01
0401
Read Command
D*
Device Address
Sensor
(Analog Read)
PLC
PLC Processing
(IP: 10.126.224.221)
VSD Output
Motor Action
Speed/Torque Control
TECHNICAL READOUT AKIRATION
NotebookLM

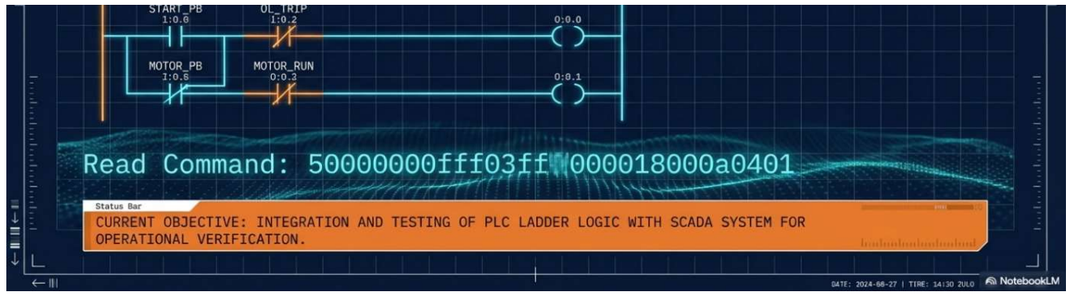

HIGH-SECURITY TECHNICAL DOSSIER
TECHNICAL READOUT AKIRATION
Project Alpha: Automated Student Registration System
VBA & Excel UserForm Architecture
UserForm GUI
student name
father name
date of birth
gender
male
Optio
female
mobile number
email adress
Image Upload
Dynamic Image Loading
Input Validation
Set oRegEx = CreateObject('VBScript.RegExp')
.Pattern = '^[w-\]{1,}@([da-zA-Z-]{1,'\.){1,}'
NotebookLM

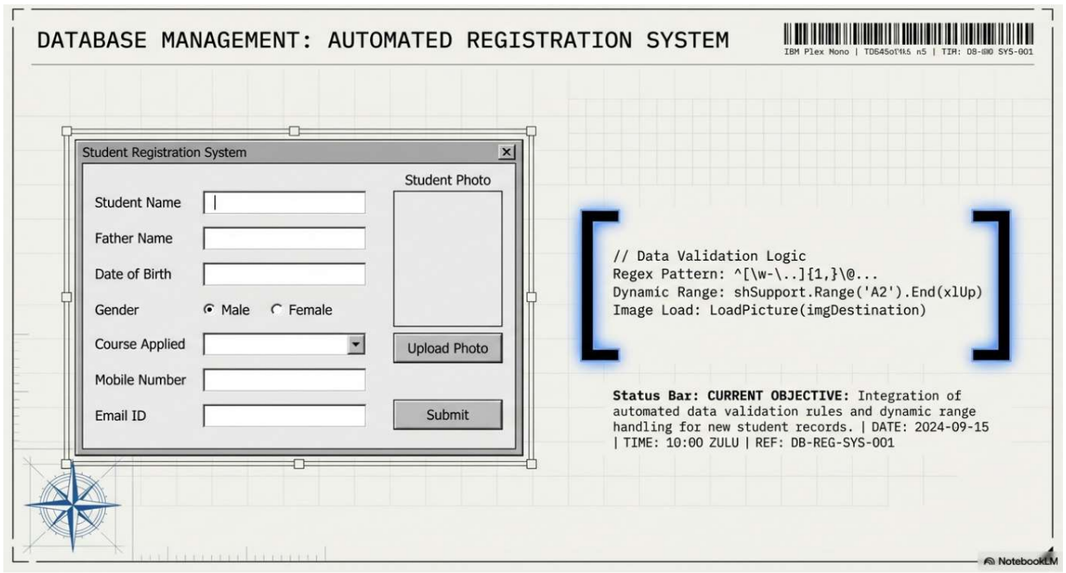

PROFESSIONAL PORTFOLIO & CASE FILE REVIEW
TSHINGOMBE TSHITADI FISTON
ENGINEERING SYSTEMS | SECURITY OPERATIONS | LEGAL PROCEEDINGS
3-PHASE INPUT
DIGITAL METROLOGY
EVIDENCE LOG
SCADA INTERFACE
CLASS 0.5 PRECISION
DIGITAL METROLOGY
CLASS 0.5 PRECISION
CONFIDENTIAL
DEPARTMENT OF JUSTICE
CASE FILE REVIEW - AUTHORIZED USE ONLY
Imports System.Data.SqlClient
Imports System.IO.Ports
Public Class MeterInterface
Private _serialPort As SerialPort
Public Sub Connect(portName As String)
_serialPort = New SerialPort(portName, 9600, Pazity.None, 8, StopBits.One)
Try
_serialPort.Open()
ProcessLog("Connection Established with Smart Meter")
Catch ex As Exception
ProcessLog("Connection Failed: " & ex.Message)
End Try
End Sub
Class
VB.NET
FORENSIC BLUEPRINT
STATUS: ACTIVE
ID: Tirc000910610
Primary Disciplines: Electrical Design (PLC/SCADA), Software Development (VB.NET), Labour Law Advocacy
Contact: 0725298946 | tshingombefiston@gmail.com
NotebookLM

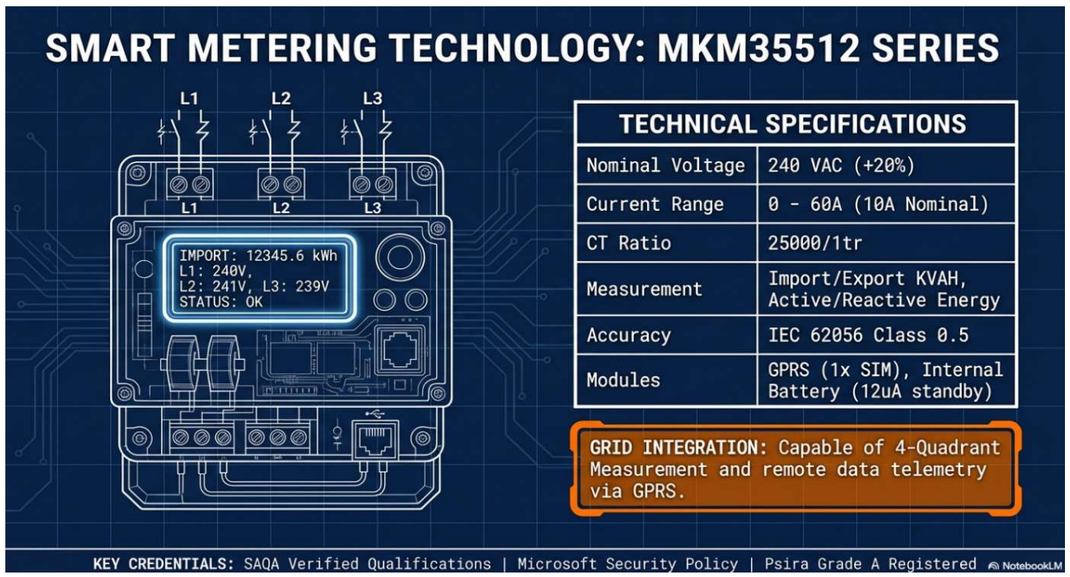

EXECUTIVE SUMMARY: INTEGRATED COMPETENCE PROFILE
TECHNICAL DOSSIER
TD-042-BP-REV-A
ENGINEERING & DEVELOPMENT
SECURITY & POLICING
LEGAL ADVOCACY
Proven capability in electrical systems (MKM35512 Series), PLC programming, and software development including ATM & Student Registration systems.
Over a decade of field experience ranging from Grade C security at Nogada SA to active applications for Detective Services at Hillbrow SAPS.
Self-represented litigant in Labour Appeal Court (Case JA 37/19) demonstrating high-level administrative literacy and tenacity.
Status Bar
CURRENT OBJECTIVE: Regularization of employment status and finalization of administrative appeals (Home Affairs/SAQA) to unlock workforce contribution.
DATE: 2024-08-27 | TIME: 14:30 ZULU
NotebookLM

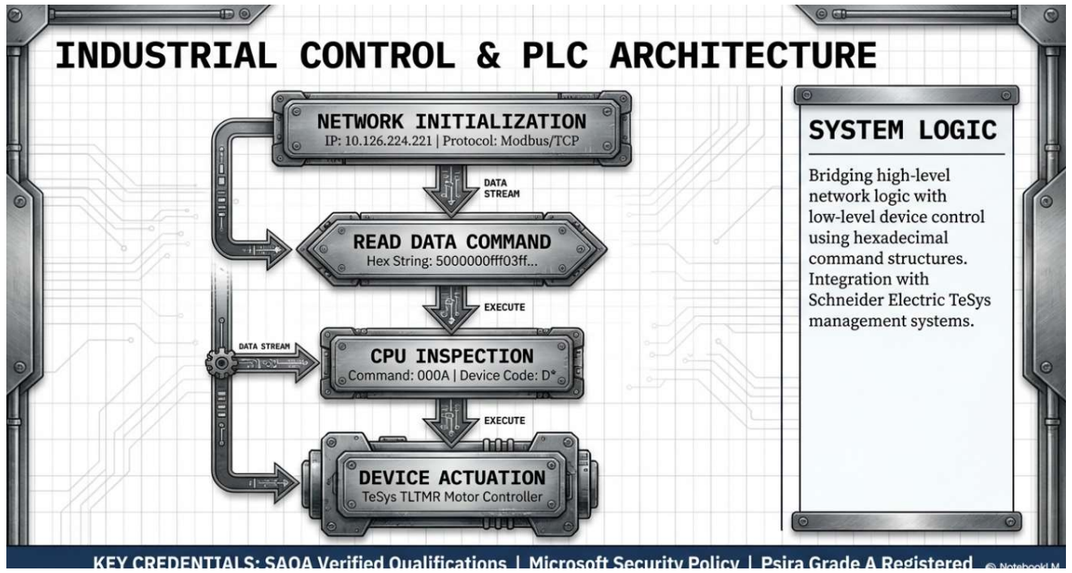

ELECTRICAL DESIGN ARCHITECTURE
TECHNICAL DOSSIER
TD-042-BP-REV-A
MCU Core Unit (EPROM FSW)
GPRS/LGT Module (Sim Card SBT IP6)
Line in
Neutral
Load
Optical RSS
Relay Drivers
LCD Display
Power Supply Unit
MKM35512 Series Smart Meter
SYSTEM SPECIFICATIONS:
- 3-Phase AC Static Watt Hour Smart Meter
- Voltage: 240 VAC +20%
- Frequency: 50Hz +5%
Active Power: $P = \frac{1}{T}\int u \cdot i \, dt$
Reactive Power: $Q = \frac{1}{T}\int u_{-90} \cdot i \, dt$
Status Bar
CURRENT OBJECTIVE: Validation of electrical schematics and power calculation methodologies for regulatory approval.
DATE: 2024-08-27 | TIME: 14:30 ZULU
NotebookLM


INDUSTRIAL AUTOMATION: PLC & SCADA INTEGRATION
TECHNICAL DOSSIER
TD-042-BP-REV-A
L1
N
START_PB I:0.0
STOP_PB I:0.1
MOTOR_RUN O:0.0
MOTOR_RUN O:0.0
MOTOR_RUN O:0.0
OL_TRIP I:0.2
DISCONNECT O:0.1
NETWORK TOPOLOGY:
- PLC IP: 10.126.224.221
- Gateway: GE D4 SCADA -> Enterprise WAN (Eskom/City Power)
- Controller: TeSys T Motor Management


START_PB
1:0.0
OL_TRIP
1:0.2
0:0.0
MOTOR_PB
1:0.6
MOTOR_RUN
0:0.3
0:0.1
Read Command: 50000000fff03ff 000018000a0401
Status Bar
CURRENT OBJECTIVE: INTEGRATION AND TESTING OF PLC LADDER LOGIC WITH SCADA SYSTEM FOR OPERATIONAL VERIFICATION.
NotebookLM


DATABASE MANAGEMENT: AUTOMATED REGISTRATION SYSTEM
Student Registration System
Student Photo
Student Name
Father Name
Date of Birth
Gender
Male
Female
Course Applied
Mobile Number
Email ID
Upload Photo
Submit
// Data Validation Logic
Regex Pattern: ^[\w-\..]{1,}\@...
Dynamic Range: shSupport.Range('A2').End(xlUp)
Image Load: LoadPicture(imgDestination)
Status Bar: CURRENT OBJECTIVE: Integration of automated data validation rules and dynamic range handling for new student records. | DATE: 2024-09-15 | TIME: 10:00 ZULU | REF: DB-REG-SYS-001
NotebookLM


SMART METERING TECHNOLOGY: MKM35512 SERIES
L1
L2
L3
IMPORT: 12345.6 kWh
L1: 240V,
L2: 241V, L3: 239V
STATUS: OK
TECHNICAL SPECIFICATIONS
Nominal Voltage
240 VAC (+20%)
Current Range
0 - 60A (10A Nominal)
CT Ratio
25000/1tr
Measurement
Import/Export KVAH, Active/Reactive Energy
Accuracy
IEC 62056 Class 0.5
Modules
GPRS (1x SIM), Internal Battery (12uA standby)
GRID INTEGRATION: Capable of 4-Quadrant Measurement and remote data telemetry via GPRS.
KEY CREDENTIALS: SAQA Verified Qualifications | Microsoft Security Policy | Psira Grade A Registered
NotebookLM


INDUSTRIAL CONTROL & PLC ARCHITECTURE
NETWORK INITIALIZATION
IP: 10.126.224.221 | Protocol: Modbus/TCP
DATA STREAM
READ DATA COMMAND
Hex String: 5000000fff03ff...
EXECUTE
DATA STREAM
CPU INSPECTION
Command: 000A | Device Code: D*
EXECUTE
DEVICE ACTUATION
TeSys TLTMR Motor Controller
SYSTEM LOGIC
Bridging high-level network logic with low-level device control using hexadecimal command structures. Integration with Schneider Electric TeSys management systems.
KEY CREDENTIALS: SAQA Verified Qualifications | Microsoft Security Policy | Psira Grade A Registered

SOFTWARE ENGINEERING: AUTOMATED INFORMATION SYSTEMS

STUDENT NAME

FATHER NAME

DATE OF BIRTHDAY

GENDER ○ MALE ○ FEMELE

COURSE APPLIED

MOBILE NUMBER

BACKEND LOGIC (VBA/SQL)

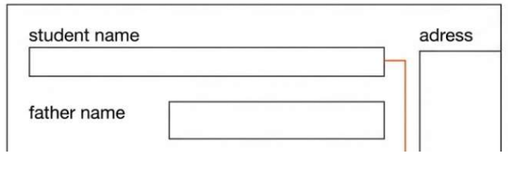
```
Function ValidEntry() As Boolean
  ' Regex for Email Validation
  .Pattern = "^[\w-\.]...@..."

  ' Date Format Enforcement
  Me.txtDOB.Value = Format(sDate, "dd-mmm-yyyy")

  ' Data Integrity Check
  If StudentName = Empty Then MsgBox "Error"
End Function
```

Full-stack implementation: From User Interface (Forms) to Database Logic (SQL/Excel).

KEY CREDENTIALS: SAQA Verified Qualifications | Microsoft Security Policy | Psira Grade A Regis

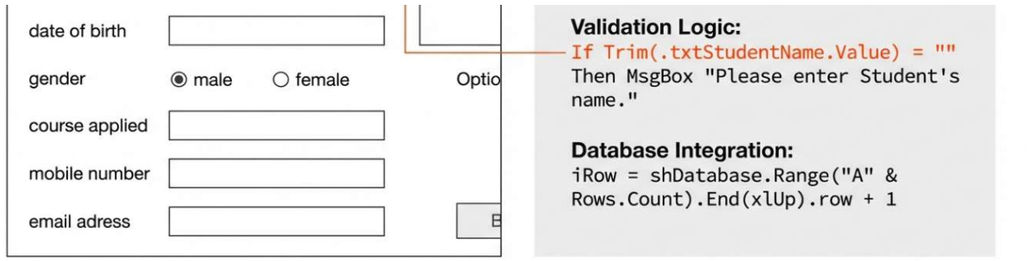
Software Engineering: Administrative Data Systems

Project: Automated Student Registration System (Excel VBA & UserForms)



Code Logic

Interface: Custom UserForm (**frmDataEntry**)

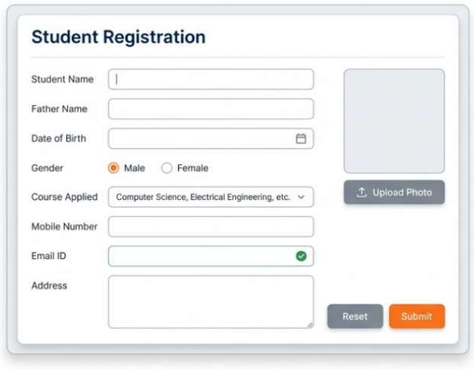


NotebookLM

Application Development: Automated Student Registration System

TA

Tech Stack: VBA, MS Excel, Regular Expressions (RegEx)



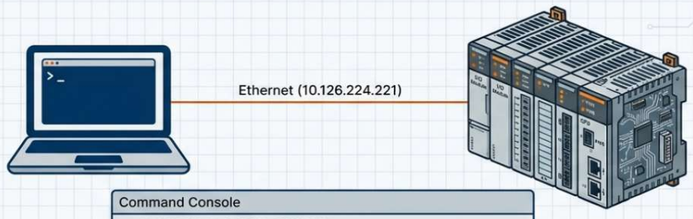

```
// Email Validation Logic
Set oRegEx = CreateObject('VBScript.RegExp')
.Pattern = '^[\w-\\.]{1,}\@...'

// Data Submission Logic
With shDatabase.Range('A' & iRow)
    .Offset(0, 1).Value = frmDataEntry.txtStudentName.Value
    .Offset(0, 5).Value = frmDataEntry.cmbCourse.Value
End With
```

NotebookLM

Industrial Automation: PLC Communication & Protocols

TA

Interfacing Software with Industrial Hardware via Network Commands



Command Console

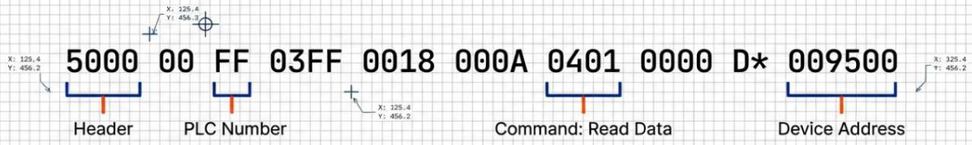
```
> INITIATE PLC COMM_PROGRAM
> TARGET IP: 10.126.224.221
> SEND HEX STREAM:
  50000000fff03ff000018000a04010000d*0095000000001
> DECODING...
  [CMD]: 0401 (Read Data)
  [ADDR]: D*009500
  [CPU]: Inspector Data Verified
```

Engineering Concept: Solving Electrical Problems via Basic Software Engineering.

NotebookLM

REV: A.01

Industrial Automation & PLC Logic



Communication
PLC Read/Write Commands
IP Addressing: 10.126.224.221

Hardware
TeSys Motor Mgmt Controller
Installation & Commissioning

Logic Design
Ladder Logic
Flow Chart Program Design Language

REV: A.01 | PROJECT: INTEGRATED SYSTEMS BLUEPRINT | DATE: 2024.06.01

NotebookLM

Software Development: User Interface & Logic (VB.NET)

Validation Logic (VBA/VB.NET)

```
If Trim(.txtStudentName.Value) = "" Then
    MsgBox 'Please enter Student name.'
    .txtStudentName.BackColor = vbRed
    ValidEntry = False
End If
```

REV: A.01 | PROJECT: INTEGRATED SYSTEMS BLUEPRINT | DATE: 2024.06.01

NotebookLM

Algorithms & Control Structures

Event-Driven Logic (Calculator)

```
Select Case [operator]
  Case '+'
      Result = Operand1 + Operand2
```

Embedded Control Loop (LED PWM)

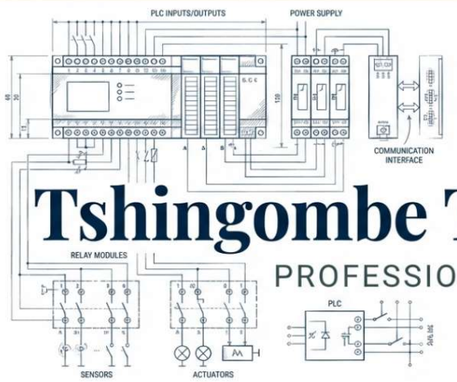
```
void loop() {
  int value = map(reading, 0, 1023, 0, 255);
  if (value > 49 && value < 100) {
```

```
  Case '^'
      Result = Operand1 ^ Operand2
  Case '%'
      Result = Operand1 % Operand2
End Select
txtInput.Text = Result.ToString()
```

```
    // Level 2 intensity
    digitalWrite(ledBank, LOW);
    delay(6);
  }
}
```

REV: A.01 PROJECT: INTEGRATED SYSTEMS BLUEPRINT DATE: 2024.06.01

NotebookLM



Tshingombe Tshitadi Fiston

PROFESSIONAL DOSSIER

Engineering Systems, Software Development, and Labour Rights Advocacy.

Senior Engineering & Assessment Officer

Confidential Review: Qualifications, Project Portfolio & Legal Compliance

NotebookLM

Electrical Engineering: Smart Power Systems

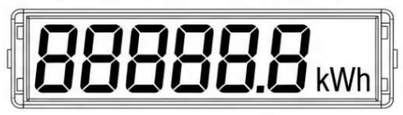
Technical Specifications: MKM35512 Series

ID
Born: 1982 | Role: Senior Engineering Officer

TECHNICAL SPECIFICATIONS

Device Type	Three-Phase AC Static Watt-Hour Smart Meter
Accuracy	Class 0.5 (0.5% deviation)
Voltage Range	240 VAC (+20%)
Current Range	0-60A (Dynamic up to 72A)
Frequency	50Hz (+5%)
Communication	GPRS Module (1x SIM), IEC 62056 Infrared

8x16 Segment LCD Display



8x16 Segment LCD Display

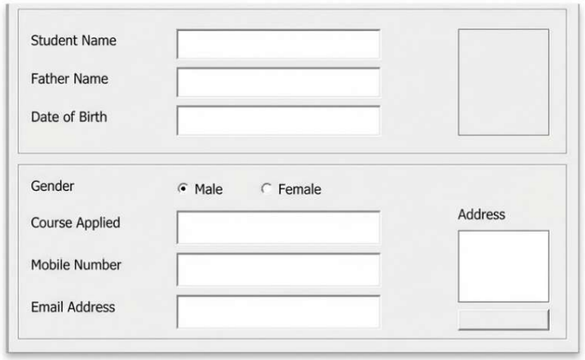
Key Features

- Tamper Detection: Magnetic interference & Cover open switch
- Measurements: V, A, kW, kvar, kVA, kWh (Import/Export)

NotebookLM

Database Management & User Interface Design

Automated Student Registration System (Excel/VBA & SQL)

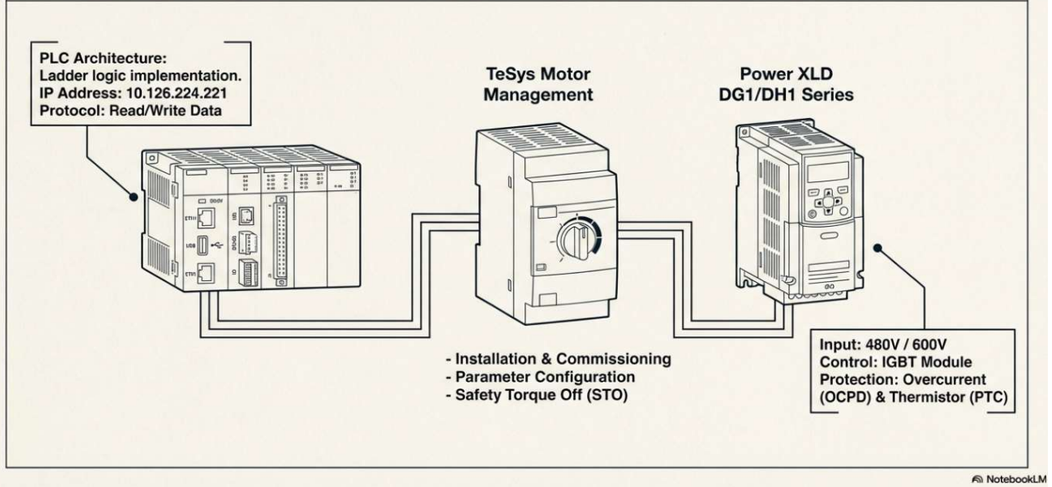


Backend Logic

- **Data Validation:** Regex for email (`'^[\w-\.]{1,}\@...'`)
- **Image Handling:** `PictureSizeMode = fmPictureSizeModeStretch`
- **SQL Integration: Automated entry validation and storage.**

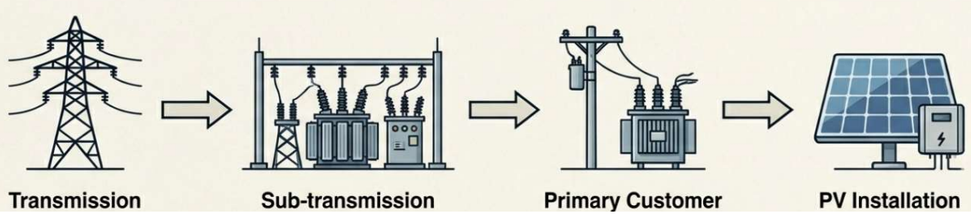
NotebookLM

Industrial Automation & Control Systems



NotebookLM

Electrical Infrastructure & Grid Management



(138kV) (26kV - 69kV) (13kV - 4kV) (6.5kW - 250kW)

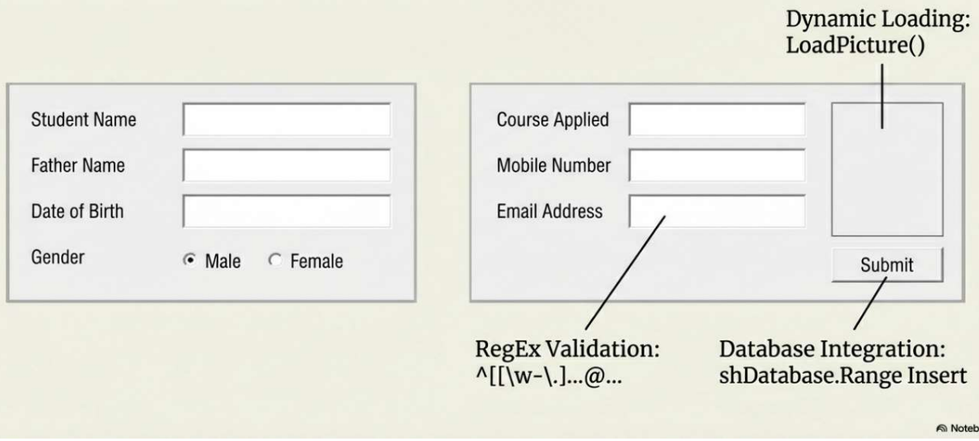
Network Integration

Data Framework: Cisco Catalyst Switches (4x 25 Uplink)
SCADA Gateway: GE D20 Station (Eskom/City Power WAN)

NotebookLM

Automated Data Management Systems

VBA & Excel UserForm Architecture



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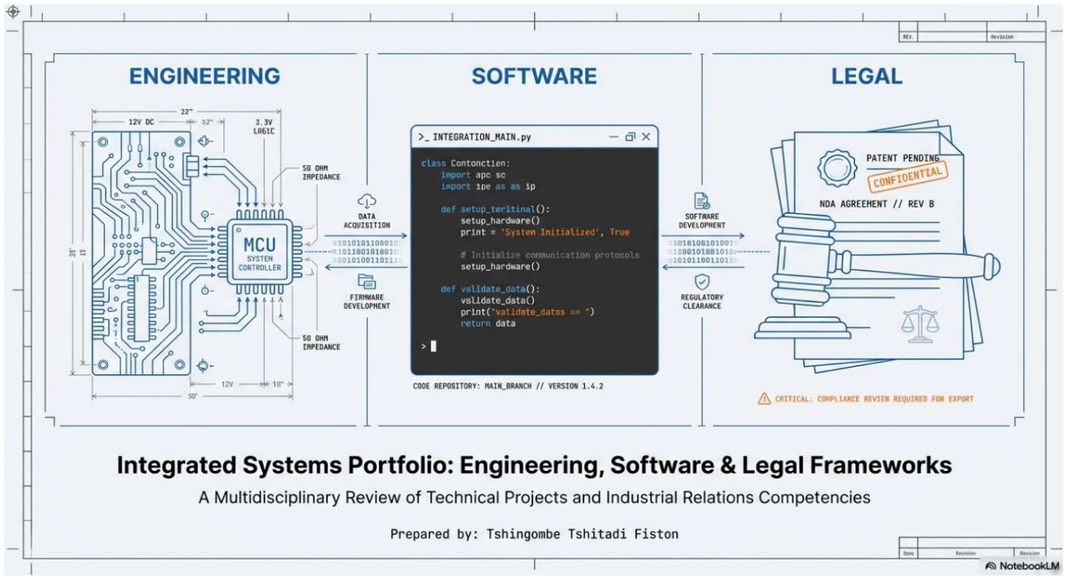


Integrated Systems Portfolio: Engineering, Software & Legal Frameworks

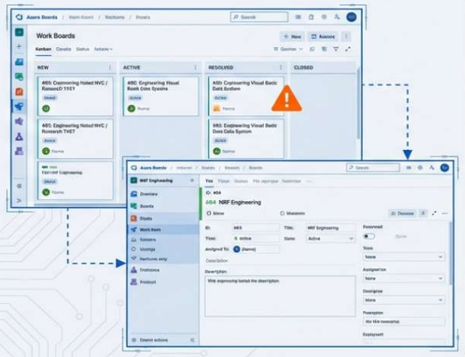
A Multidisciplinary Review of Technical Projects and Industrial Relations Competencies

Prepared by: Tshingombe Tshitadi Fiston

NotebookLM

AGILE METHODOLOGY & WORK ITEM TRACKING

VISUAL EVIDENCE



METHODOLOGY DETAILS

PLATFORM: Azure DevOps / Boards
FRAMEWORK: Agile / Scrum
ACTIVE SPRINT ITEMS:
- #80: Engineering Visual Basic Data System
- #83: Engineering Nated NVC / Research TVET
- #84: NRF Engineering

WORKFLOW STATUS:
- New -> Active -> Resolved -> Closed
- **Velocity Tracking:** Engineering Data Systems
- **Traceability:** Full audit trail from requirement to deployment.

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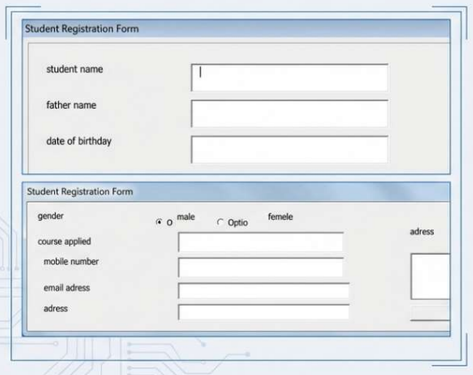
DATABASE ADMINISTRATION: AUTOMATED REGISTRATION SYSTEMS

FORM DESIGN



BACKEND AUTOMATION

1. Data Validation (Regex)
Ensuring data integrity through pattern matching:
`Pattern = "^[\w-\.]{1,}\@([\da-zA-Z-]{1,}\.){1,}"`

2. Database Connectivity
Integration with MS Access and SQL backends for persistent record storage.

3. Dynamic Image Handling
Logic for uploading and rendering student identification photos (`LoadPicture`).
`Pattern = "^[\w-\.]{1,}\@(\da-zA-Z-]{1,}\.){1,}"`

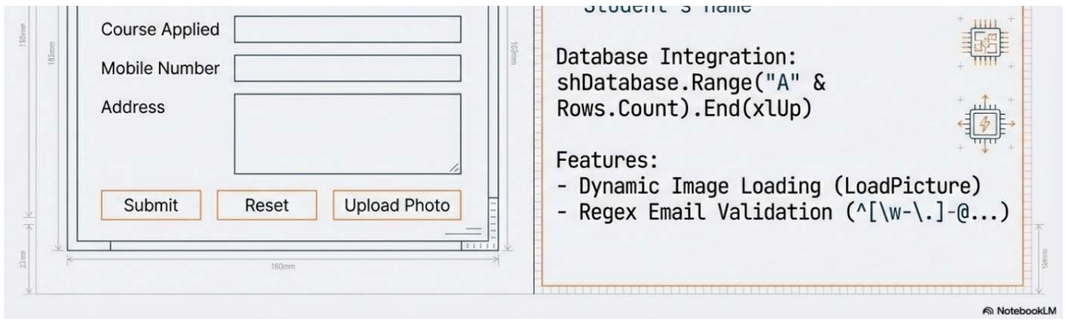
4. Automation Logic
Auto-finding next empty database row:
`iRow = shDatabase.Range("A" & Rows.Count).End(xlUp).Row + 1`

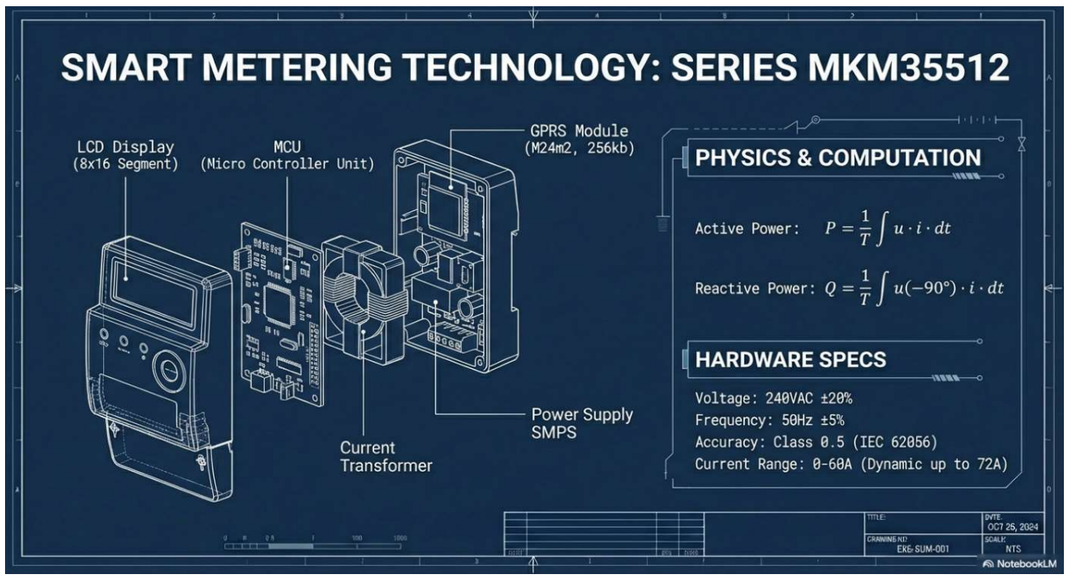
NotebookLM

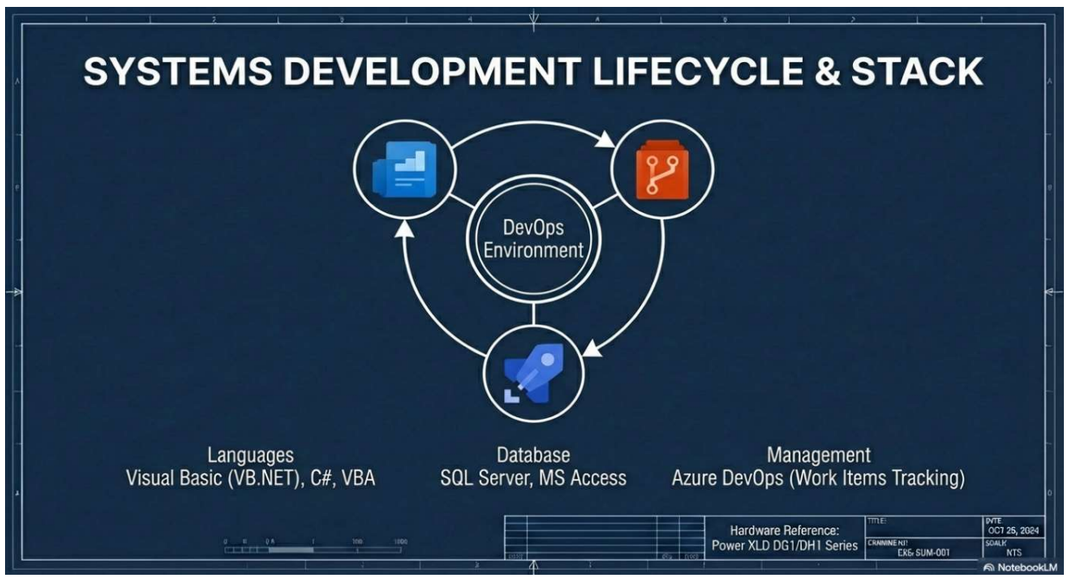
Software Architecture: Administrative Automation.

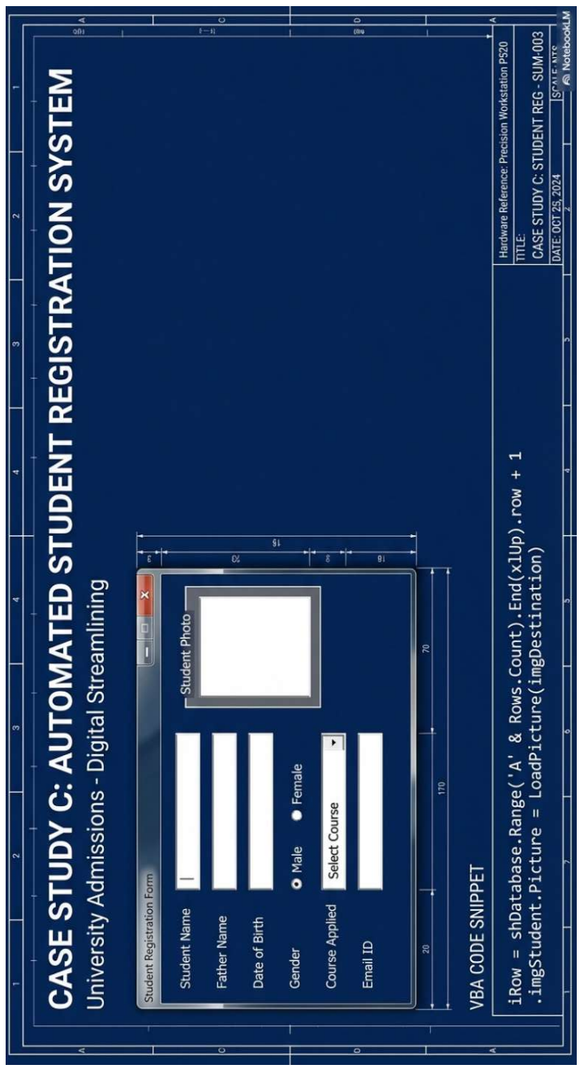
Back-End Logic (VBA)

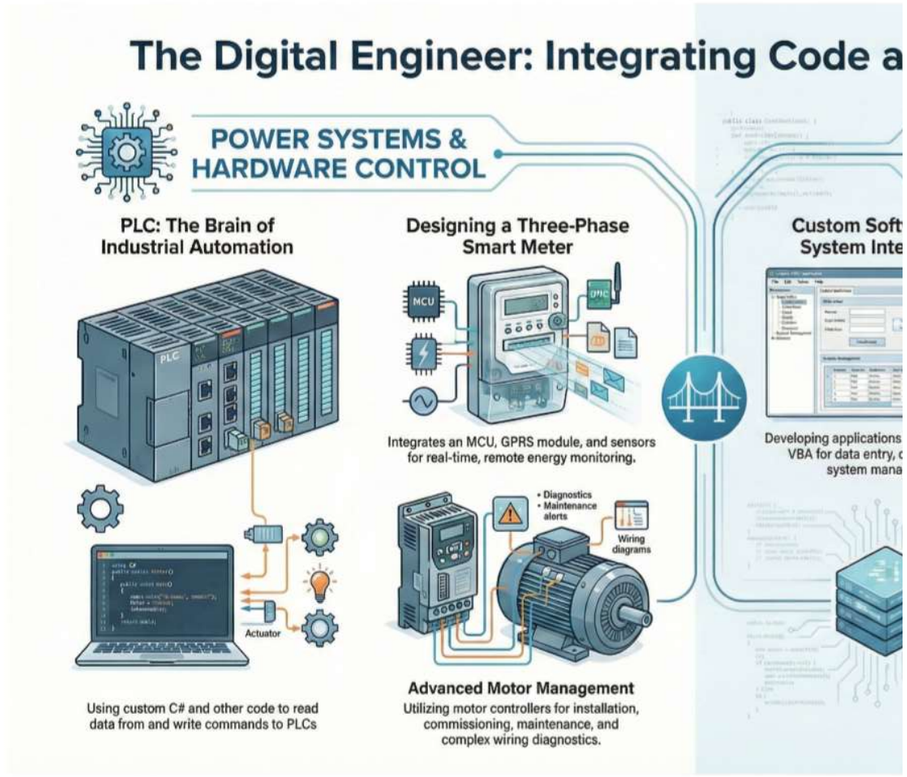
```
Validation Logic:
If Trim(.txtStudentName.Value) =
 "" Then MsgBox "Please enter
  Student's name"
```

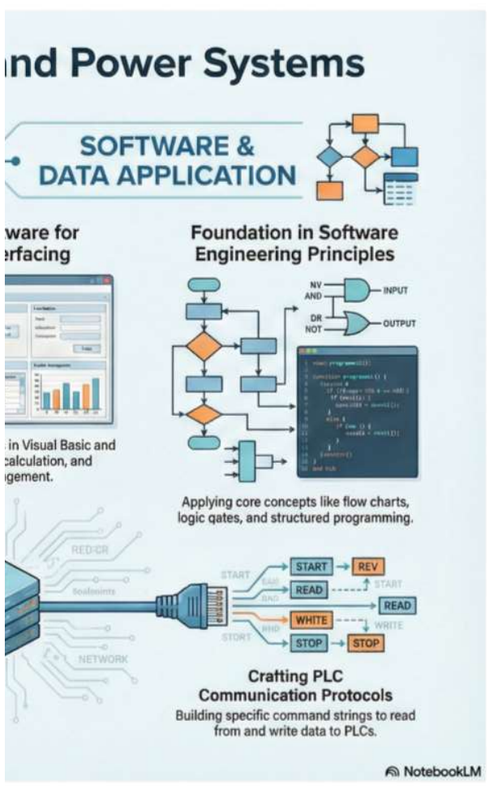

Course Applied
Mobile Number
Address
Submit
Reset
Upload Photo
Database Integration:
shDatabase.Range("A" &
Rows.Count).End(xlUp)
Features:
- Dynamic Image Loading (LoadPicture)
- Regex Email Validation (^[\w-\.]-@...)
NotebookLM


SMART METERING TECHNOLOGY: SERIES MKM35512
LCD Display
(8x16 Segment)
MCU
(Micro Controller Unit)
GPRS Module
(M24m2, 256kb)
Power Supply
SMPS
Current
Transformer
PHYSICS & COMPUTATION
Active Power: $P = \frac{1}{T}\int u \cdot i \cdot dt$
Reactive Power: $Q = \frac{1}{T}\int u(-90°) \cdot i \cdot dt$
HARDWARE SPECS
Voltage: 240VAC ±20%
Frequency: 50Hz ±5%
Accuracy: Class 0.5 (IEC 62056)
Current Range: 0-60A (Dynamic up to 72A)
DATE
OCT 25, 2024
DRAWING NO
EK6-SUM-001
SCALE
NTS
NotebookLM


SYSTEMS DEVELOPMENT LIFECYCLE & STACK
DevOps
Environment
Languages
Visual Basic (VB.NET), C#, VBA
Database
SQL Server, MS Access
Management
Azure DevOps (Work Items Tracking)
Hardware Reference:
Power XLD DG1/DH1 Series
DATE
OCT 25, 2024
DRAWING NO
EK6-SUM-001
SCALE
NTS
NotebookLM


ATION SYSTEM
Hardware Reference: Precision Workstation P520
TITLE:
CASE STUDY C: STUDENT REG - SUM-003
DATE: OCT 25, 2024
SCALE: NTS
NotebookLM
CASE STUDY C: AUTOMATED STUDENT REGISTRATIO
University Admissions - Digital Streamlining
Student Registration Form
Student Name
Father Name
Date of Birth
Gender
Male
Female
Course Applied
Select Course
Email ID
Student Photo
VBA CODE SNIPPET
iRow = shDatabase.Range('A' & Rows.Count).End(xlUp).row + 1
.imgStudent.Picture = LoadPicture(imgDestination)


The Digital Engineer: Integrating Code a
POWER SYSTEMS & HARDWARE CONTROL
PLC: The Brain of Industrial Automation
PLC
Actuator
Using custom C# and other code to read data from and write commands to PLCs
Designing a Three-Phase Smart Meter
MCU
GPRS
Integrates an MCU, GPRS module, and sensors for real-time, remote energy monitoring.
• Diagnostics
• Maintenance alerts
Wiring diagrams
Advanced Motor Management
Utilizing motor controllers for installation, commissioning, maintenance, and complex wiring diagnostics.
Custom Soft
System Inte
Developing applications
VBA for data entry,
system mana


nd Power Systems
SOFTWARE & DATA APPLICATION
ware for erfacing
in Visual Basic and calculation, and gement.
Foundation in Software Engineering Principles
NV AND
DR NOT
INPUT
OUTPUT
Applying core concepts like flow charts, logic gates, and structured programming.
START
READ
WHITE
STOP
REV
READ
WRITE
STOP
Crafting PLC Communication Protocols
Building specific command strings to read from and write data to PLCs.
NotebookLM